

Column E Explanation

This form is intended as an aid to completing the Column E explanation. It is not an official form and its use is voluntary. Names, addresses, protocols, veterinary care programs, and the like, are not required as part of an explanation. A Column E explanation must be written so as to be understood by lay persons as well as scientists.

1. Registration Number: 33-R-0024

2. Number 6 of animals used in this study.

3. Species (common name) GUINEA PIG of animals used in the study.

4. Explain the procedure producing pain and/or distress.

A series of three i.p. injections of ovalbumin (OVA 100 µg and aluminium hydroxide 100 mg in 1 mL saline) were administered, over a week, to induce asthmatic attacks, followed by a two weeks sensitization period and then exposure to a fine mist of aerosolized ovalbumin (5 mg/ml in saline) solution for 30 min. The latter procedure was repeated for three trials with a one day interval between each trial. Aerosolized ovalbumin produces symptoms that may include rapid breathing, restlessness, chewing, ruffling of the fur, labored breathing with the use of accessory muscles of the respiration, prolonged expiration, gasping, coughing, dilation of alae nasi, cyanosis and convulsion.

5. Provide scientific justification why pain and/or distress could not be relieved. State methods or means used to determine that pain and/or distress relief would interfere with test results. (For Federally mandated testing, see Item 6 below)

Animals are not given analgesic or anesthetics to relieve these symptoms, because such treatment would reduce or prevent the asthmatic symptoms, which are required for assessing the severity of responses. Anesthetics often affect ion channels and might also therefore interfere with parameters measured in airway smooth muscle cells post euthanasia. A search of PubMed (1999 – 2011) was used to determine that pain and/or distress relief would interfere with the test results.

6. What, if any, federal regulations require this procedure? Cite the agency, the code of Federal Regulations (CFR) title number and the specific section number (e.g., APHIS, 9 CFR 113.102):

Agency N/A CFR N/A